

# ALL TECHNOLOGIES REPORT

JANUARY 1/1963 -- DECEMBER 31/1999



March 2000

U.S. PATENT AND TRADEMARK OFFICE  
OFFICE FOR PATENT AND TRADEMARK INFORMATION / TAF PROGRAM  
PK3 - Suite 441, WASHINGTON, DC 20231  
tel (703) 306-2600 / FAX (703) 306-2737

*A TECHNOLOGY ASSESSMENT AND FORECAST REPORT*

# All Technologies Report

## 1/1/1963 - 12/31/1999

### Explanation of Data

This Technology Assessment and Forecast (TAF) Program Report profiles utility patent activity (i.e., "patents for inventions") for U.S. patents granted between January 1, 1963 and **December 31, 1999** in all technology areas. The source of the data used for this report is the TAF database maintained by the Office for Patent and Trademark Information.

#### Data Distribution By Date of Grant and By Date of Application

##### **Parts A1 and A2**

Part A1 distributes utility patent GRANT data by year of patent grant ("Patents Granted By Date of Patent Grant"). Part A2 distributes grant data by the year in which the patented application was filed ("Patents Granted By Date of Patent Application"). Parts A1 and A2 each provide patent counts (pages A1-1 and A2-1) and percent distributions (pages A1-2 and A2-2).

Patent data, as shown in the "**Pre 1986**" column, corresponds to the period 1963 through **1985**.

##### **Part B**

Part B of this report distributes patent GRANT data for organizations that have received U.S. patents since 1969. Data are presented by the year in which the patent was granted ("Patents By Year of Grant") and the year the patented application was filed ("Patents by Year of Application").

**DATA FOR THOSE APPLICATIONS WHICH WERE FILED BUT NEVER ISSUED (ROUGHLY 40% OF TOTAL FILINGS) ARE NOT INCLUDED IN THIS REPORT.**

Since the average time period between filing for a utility patent and the issuing of the patent (i.e., the patent's "pendency") is now about 24 months, the patented application data for applications filed from **1997 to DECEMBER 1999** are incomplete.\* This is because a significant number of the applications filed from **1997 to DECEMBER 1999** which will ultimately become patents were still pending in **DECEMBER 1999**. Since they had not yet become patents at the time this report was prepared, they were not included in this report.

Patented application data are of significant value since the date an application was filed more accurately reflects when the technology was developed. Additionally, fluctuations in data based on application date are much more likely to reflect changes in technological activity since, for the most part, such fluctuations would be immune from changes in U.S. Patent and Trademark Office (PTO) processing such as occurred in 1986 when the PTO issued fewer patents than would have normally been expected due to a lack of funds to print patents. Note that a patent's "pendency" can be quite variable from one patent to another thereby affecting the date of patent grant. Such variation in

pendency is determined by many factors, including PTO workload (which varies between technologies), budget and manpower levels, patent printing schedules, etc.

"Patents Granted By Date of Patent Application", as shown in the "**Pre 1986**" column, correspond to utility patent grants in the report that were filed prior to **1986**.

---

#### Parts of the Report

**Parts A1 and A2** present tables which show, by number and percent, the patent activity in all technologies. Part A1 presents data by year of patent grant ("Patents Granted By Date of Patent Grant"). Part A2 redistributes grant data by year of patent application ("Patents Granted By Date of Patent Application"). The location of patent origin is determined by the residence of the first-named inventor at the time of grant.

**Patent ownership** information reflects ownership at the time of patent grant and does not include subsequent changes in ownership. If more than one assignee was declared at the time of grant, the patent is attributed to the first-named assignee. The U.S. and Foreign Corporations ownership categories count predominantly corporate patents; however, patents assigned to other organizations such as small businesses, nonprofit organizations, universities, etc. are also included in this category. While U.S. Government patent ownership includes only patents granted to the Federal Government, no such distinction is made for Foreign Government patents.

**Part B** is a ranked listing of national and international organizations (i.e., corporations, universities, government agencies) which have received 1000 or more U.S. utility patents since 1969. Data line 1 for each listed organization distributes counts of patent grants by year of grant. Data line 2 for each organization redistributes those same patent grants by year in which the patented applications were filed. Information on patent ownership reflects ownership at the time of patent grant. Although a substantial effort has been made to combine name variations into a single organizational name, many organizations continue to have patents listed under more than one organizational name.

**Note:** A report titled Industrial Patent Activity in the United States is a more extensive version of Part B of this report. That report, which currently shows organizations granted 15 or more patents during the period 1973 to 1998, is available from the National Technical Information Service (703-605-6000).

---

\* As of **DECEMBER 1999**, utility patent application data are approximately 79% complete for utility patent applications filed in 1997 and 21% complete for applications filed in 1998. They are essentially complete for applications filed prior to 1997.

Part A1  
Patent Grants as Distributed By Year of Patent Grant



## ----- Technology Assessment and Forecast Report -----

ALL TECHNOLOGIES REPORT (PARTS A1, A2, B)

Page A1- 2

---- Patents Granted By Date Of Patent Grant (Granted: Jan 01, 1963 - Dec 31, 1999) ----

----- PERCENT OF PATENTS -----  
 Pre 1986 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 Total

Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
-------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

U.S. Origin	68	54	52	52	53	52	53	54	54	55	55	56	55	54	55
-------------	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Foreign Origin	32	46	48	48	47	48	47	46	46	45	45	44	45	46	39
----------------	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

JAPAN	8	19	20	21	21	22	22	23	23	22	21	21	21	20	14
-------	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----

GERMANY	8	10	10	9	9	8	8	8	7	7	7	6	6	6	8
---------	---	----	----	---	---	---	---	---	---	---	---	---	---	---	---

UNITED KINGDOM	4	3	3	3	3	3	3	2	2	2	2	2	2	2	3
----------------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

FRANCE	3	3	3	3	3	3	3	3	3	3	3	3	3	2	3
--------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

CANADA	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
--------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

SWITZERLAND	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1
-------------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

ITALY	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
-------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

SWEDEN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
--------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

NETHERLANDS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
-------------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

TAIWAN					1	1	1	1	1	1	2	2	2	2	1
--------	--	--	--	--	---	---	---	---	---	---	---	---	---	---	---

SOUTH KOREA								1	1	1	1	2	2	2	1
-------------	--	--	--	--	--	--	--	---	---	---	---	---	---	---	---

AUSTRALIA					1	1									0
-----------	--	--	--	--	---	---	--	--	--	--	--	--	--	--	---

BELGIUM															0
---------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---

AUSTRIA					1										0
---------	--	--	--	--	---	--	--	--	--	--	--	--	--	--	---

ISRAEL														1	0
--------	--	--	--	--	--	--	--	--	--	--	--	--	--	---	---

U.S.S.R.															0
----------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---

FINLAND															0
---------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---

DENMARK															0
---------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---

SPAIN															0
-------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---

NORWAY															0
--------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---

SOUTH AFRICA															0
--------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---

HUNGARY															0
---------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---

CZECHOSLOVAKIA															0
----------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---

MEXICO															0
--------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---

NEW ZEALAND															0
-------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---

CHINA, HONG KONG S.A.R.															0
-------------------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---

IRELAND															0
---------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---

BRAZIL															0
--------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---

ARGENTINA															0
-----------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---

CHINA P.REP.															0
--------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---

INDIA															0
-------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---

SINGAPORE															0
-----------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---

RUSSIAN FEDERATION															0
--------------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---

POLAND															0
--------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---

LUXEMBOURG															0
------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---

VENEZUELA															0
-----------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---

Others ( 126 )															0
----------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	---

**Ownership:**

U.S. Corporations	52	42	41	40	40	40	41	41	43	43	43	44	45	45	47
-------------------	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

U.S. Government	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2
-----------------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

U.S. Individuals	17	13	13	13	14	14	14	13	12	13	13	13	12	11	15
------------------	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Foreign Corporations	24	37	39	40	39	39	39	39	38	38	38	38	39	39	31
----------------------	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Foreign Government	1	1	1												0
--------------------	---	---	---	--	--	--	--	--	--	--	--	--	--	--	---

Foreign Individuals	5	5	5	5	5	5	5	5	4	4	4	4	4	4	5
---------------------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

**Part A2**  
**Patent Grants as Distributed By Year of Patent Application**

## ---- Technology Assessment and Forecast Report ----

ALL TECHNOLOGIES REPORT (PARTS A1, A2, B)

Page A2- 1

## ---- Patents Granted By Date Of Patent Application (Granted: Jan 01, 1963 - Dec 31, 1999) ----

---- NUMBER OF PATENTED APPLICATIONS ----

Pre 1986 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 Total

Total 1632029 75087 81458 90134 96077 99254 100016 103307 106848 120380 137662 131452 114883 33783 1560 2923930

U.S. Origin 1085906 38932 42455 47018 50263 53302 53938 56988 59817 66411 77699 70595 61831 18925 913 1784993

Foreign Origin 546123 36155 39003 43116 45814 45952 46078 46319 47031 53969 59963 60857 53052 14858 647 1138937

JAPAN 146378 15370 16963 19872 21662 22113 22837 22811 22239 25685 27761 27803 23841 5877 231 421443

GERMANY 129120 7207 7359 7625 7765 7508 6923 6985 6834 7506 8329 8224 7442 2195 74 221096

UNITED KINGDOM 65163 2475 2753 2713 2816 2596 2344 2273 2504 2871 3286 3020 2534 644 20 98012

FRANCE 48741 2580 2725 2946 2931 3053 2987 2941 2947 3113 3568 3272 2807 756 31 85398

CANADA 27333 1402 1672 1882 2037 1940 2054 1989 2295 2512 2918 2735 2328 744 32 53873

SWITZERLAND 28592 1245 1189 1329 1358 1199 1175 1134 1134 1218 1306 1130 982 314 9 43314

ITALY 16993 1098 1139 1267 1232 1284 1250 1270 1190 1274 1453 1403 1242 323 14 32432

SWEDEN 17937 771 749 724 748 659 696 722 829 992 1066 1048 1048 288 9 28286

NETHERLANDS 15414 798 841 982 1005 919 813 856 900 931 1008 1074 937 201 8 26687

TAIWAN 1125 351 517 557 725 932 1116 1260 1572 1913 2235 2865 3073 1603 135 19979

SOUTH KOREA 325 86 141 207 410 510 795 908 1031 1594 2092 3312 2699 727 18 14855

AUSTRALIA 5480 426 433 445 427 449 423 452 503 521 600 660 448 116 3 11386

BELGIUM 5874 308 307 301 346 336 347 337 402 499 667 614 459 167 8 10972

AUSTRIA 5797 335 338 381 367 396 332 307 330 404 433 370 355 107 8 10260

ISRAEL 2323 231 295 283 320 326 317 356 428 587 655 619 507 126 5 7378

U.S.S.R. 6130 107 140 147 156 137 80 50 20 10 9 2 3 1 6992

FINLAND 2380 211 264 262 310 350 352 331 364 465 522 615 448 106 4 6984

DENMARK 3452 170 190 200 154 232 203 180 231 284 434 325 319 97 8 6479

SPAIN 1662 118 117 124 146 146 133 166 156 190 203 208 185 44 3 3601

NORWAY 1916 126 115 120 94 119 122 129 142 142 180 177 165 44 2 3593

SOUTH AFRICA 1737 89 130 95 124 98 88 96 143 138 98 107 81 25 2 3051

HUNGARY 1607 102 101 98 87 86 67 44 45 44 50 31 28 9 2399

CZECHOSLOVAKIA 1885 39 26 40 32 16 14 20 19 10 10 6 4 2121

MEXICO 1291 45 31 37 38 43 49 36 50 50 60 50 17 1 1832

NEW ZEALAND 728 62 52 45 52 44 39 40 37 78 88 106 85 15 1471

CHINA, HONG KONG S.A.R. 376 40 43 46 62 50 64 65 69 110 100 132 119 46 7 1329

IRELAND 432 44 51 63 52 54 57 50 52 96 76 73 65 15 1180

BRAZIL 482 28 36 31 62 41 58 57 60 89 60 73 66 19 3 1165

ARGENTINA 517 18 24 13 10 27 24 24 38 38 35 41 26 15 850

CHINA P.REP. 131 52 42 51 45 43 53 50 73 52 63 66 72 17 1 811

INDIA 299 18 10 20 27 25 24 35 34 42 51 74 83 28 1 771

SINGAPORE 75 7 10 14 21 19 32 60 54 96 96 126 109 27 1 747

RUSSIAN FEDERATION 2 27 96 124 143 171 140 30 3 736

POLAND 550 9 9 17 8 8 9 6 13 15 9 18 12 3 686

LUXEMBOURG 360 29 23 21 23 25 29 25 18 31 20 23 17 5 649

VENEZUELA 210 26 25 15 18 28 29 33 26 28 22 27 32 10 1 530

Others ( 126 ) 3308 132 143 143 144 150 147 181 167 217 267 247 241 97 5 5589

Ownership:

U.S. Corporations 827097 30422 32768 36220 38820 40951 41958 44905 47203 52885 63853 58135 50225 14214 654 1380310

U.S. Government 36385 738 662 893 1005 1172 1186 1213 1192 1046 1090 836 714 184 8 48324

U.S. Individuals 263145 9653 10906 12090 12745 13340 12830 12887 13768 15013 15640 14466 13304 5249 281 425317

Foreign Corporations 412020 29816 32111 35983 38311 38630 39187 39615 39719 45965 51521 52314 45572 12225 483 913472

Foreign Government 6387 451 432 388 453 473 420 340 265 287 293 237 137 24 1 10588

Foreign Individuals 86995 4007 4579 4560 4743 4688 4435 4347 4701 5184 5265 5464 4931 1887 133 145919

## ----- Technology Assessment and Forecast Report -----

ALL TECHNOLOGIES REPORT (PARTS A1, A2, B)

Page A2- 2

## ---- Patents Granted By Date Of Patent Application (Granted: Jan 01, 1963 - Dec 31, 1999) ----

## ---- PERCENT OF PATENTED APPLICATIONS ----

	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Total
--	----------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
-------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

U.S. Origin	67	52	52	52	52	54	54	55	56	55	56	54	54	56	59	61
-------------	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Foreign Origin	33	48	48	48	48	46	46	45	44	45	44	46	46	44	41	39
----------------	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

JAPAN	9	20	21	22	23	22	23	22	21	21	20	21	21	17	15	14
-------	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

GERMANY	8	10	9	8	8	7	7	6	6	6	6	6	6	5	8
---------	---	----	---	---	---	---	---	---	---	---	---	---	---	---	---

UNITED KINGDOM	4	3	3	3	3	2	2	2	2	2	2	2	2	1	3
----------------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

FRANCE	3	3	3	3	3	3	3	3	3	3	2	2	2	2	3
--------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

CANADA	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
--------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

SWITZERLAND	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1
-------------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

ITALY	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
-------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

SWEDEN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
--------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

NETHERLANDS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
-------------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

TAIWAN															
--------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

SOUTH KOREA															
-------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

AUSTRALIA	1	1													0
-----------	---	---	--	--	--	--	--	--	--	--	--	--	--	--	---

BELGIUM														1	0
---------	--	--	--	--	--	--	--	--	--	--	--	--	--	---	---

AUSTRIA														1	0
---------	--	--	--	--	--	--	--	--	--	--	--	--	--	---	---

ISRAEL														0
--------	--	--	--	--	--	--	--	--	--	--	--	--	--	---

U.S.S.R.														0
----------	--	--	--	--	--	--	--	--	--	--	--	--	--	---

FINLAND														0
---------	--	--	--	--	--	--	--	--	--	--	--	--	--	---

DENMARK													1	0
---------	--	--	--	--	--	--	--	--	--	--	--	--	---	---

SPAIN														0
-------	--	--	--	--	--	--	--	--	--	--	--	--	--	---

NORWAY														0
--------	--	--	--	--	--	--	--	--	--	--	--	--	--	---

SOUTH AFRICA														0
--------------	--	--	--	--	--	--	--	--	--	--	--	--	--	---

HUNGARY														0
---------	--	--	--	--	--	--	--	--	--	--	--	--	--	---

CZECHOSLOVAKIA														0
----------------	--	--	--	--	--	--	--	--	--	--	--	--	--	---

MEXICO														0
--------	--	--	--	--	--	--	--	--	--	--	--	--	--	---

NEW ZEALAND														0
-------------	--	--	--	--	--	--	--	--	--	--	--	--	--	---

CHINA, HONG KONG S.A.R.														0
-------------------------	--	--	--	--	--	--	--	--	--	--	--	--	--	---

IRELAND														0
---------	--	--	--	--	--	--	--	--	--	--	--	--	--	---

BRAZIL														0
--------	--	--	--	--	--	--	--	--	--	--	--	--	--	---

ARGENTINA														0
-----------	--	--	--	--	--	--	--	--	--	--	--	--	--	---

CHINA P.REP.														0
--------------	--	--	--	--	--	--	--	--	--	--	--	--	--	---

INDIA														0
-------	--	--	--	--	--	--	--	--	--	--	--	--	--	---

SINGAPORE														0
-----------	--	--	--	--	--	--	--	--	--	--	--	--	--	---

RUSSIAN FEDERATION														0
--------------------	--	--	--	--	--	--	--	--	--	--	--	--	--	---

POLAND														0
--------	--	--	--	--	--	--	--	--	--	--	--	--	--	---

LUXEMBOURG														0
------------	--	--	--	--	--	--	--	--	--	--	--	--	--	---

VENEZUELA														0
-----------	--	--	--	--	--	--	--	--	--	--	--	--	--	---

Others ( 126 )														0
----------------	--	--	--	--	--	--	--	--	--	--	--	--	--	---

<b>Ownership:</b>														
-------------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--

U.S. Corporations	51	41	40	40	40	41	42	43	44	44	46	44	44	42	42	47
-------------------	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

U.S. Government	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
-----------------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

U.S. Individuals	16	13	13	13	13	13	13	12	13	12	11	11	12	16	18	15
------------------	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Foreign Corporations	25	40	39	40	40	39	39	38	37	38	37	40	40	36	31	31
----------------------	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

Foreign Government	1	1														0
--------------------	---	---	--	--	--	--	--	--	--	--	--	--	--	--	--	---

Foreign Individuals	5	5	6	5	5	5	4	4	4	4	4	4	4	6	9	5
---------------------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

**Part B**  
**Ranked Listing of Organizations with Patent Grants**  
**As Distributed By Year of Patent Grant**  
**and As Distributed By Year of Patent Application**

## ---- Organizational Patenting

(Granted: Jan 01, 1969 - Dec 31, 1999) ---- Ranked List of Organizations with 1000 or More Patents ----

	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
--	-------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

## INTERNATIONAL BUSINESS MACHINES CORPORATION

Patents By Year of Grant:	9078	598	591	549	623	609	679	843	1085	1298	1383	1869	1724	2657	2756	26342
Patents By Year of Application:	10303	547	541	637	708	877	1227	1488	1220	1765	2405	2365	1943	303	13	26342

## GENERAL ELECTRIC COMPANY

Patents By Year of Grant:	14763	714	779	689	819	787	809	937	932	970	758	819	664	729	699	25868
Patents By Year of Application:	16175	664	707	783	821	900	885	951	862	862	818	702	575	157	6	25868

## HITACHI, LTD

Patents By Year of Grant:	5957	731	845	908	1054	908	929	956	913	976	910	963	903	1094	1008	19055
Patents By Year of Application:	7652	827	924	1053	1064	1022	1001	914	900	962	1076	889	621	143	7	19055

## CANON KABUSHIKI KAISHA

Patents By Year of Grant:	3067	523	846	723	954	870	827	1109	1037	1096	1087	1541	1381	1928	1795	18784
Patents By Year of Application:	4392	787	710	813	960	989	1166	1235	1282	1809	2055	1360	1095	124	7	18784

## TOSHIBA CORPORATION

Patents By Year of Grant:	3598	694	824	751	962	893	1014	1023	1039	968	969	914	862	1170	1200	16881
Patents By Year of Application:	5073	693	823	961	1012	1039	1182	928	881	1074	1045	1115	848	196	11	16881

## EASTMAN KODAK COMPANY

Patents By Year of Grant:	5780	229	296	433	589	721	863	775	1007	888	772	768	795	1124	992	16032
Patents By Year of Application:	6196	346	459	696	833	908	928	1034	772	748	763	1140	883	311	15	16032

## AT&amp;T CORP.

Patents By Year of Grant:	9213	437	406	375	387	430	484	440	448	595	638	510	46	150	278	14837
Patents By Year of Application:	10082	360	308	335	509	492	461	564	690	472	197	177	176	13	1	14837

## U.S. PHILIPS CORPORATION

Patents By Year of Grant:	6519	503	687	581	746	637	650	501	441	396	504	477	473	725	735	14575
Patents By Year of Application:	7659	600	569	654	668	554	494	439	448	556	637	667	532	93	5	14575

## E. I. DU PONT DE NEMOURS AND COMPANY

Patents By Year of Grant:	7560	329	419	375	443	481	597	599	568	486	441	395	311	393	338	13735
Patents By Year of Application:	8204	394	406	434	573	640	551	504	448	416	418	341	312	89	5	13735

## MOTOROLA, INC.

Patents By Year of Grant:	3244	334	414	341	384	394	613	660	729	837	1012	1064	1058	1406	1192	13682
Patents By Year of Application:	3868	370	330	361	581	682	783	838	953	1189	1363	1285	902	173	4	13682

## MITSUBISHI DENKI KABUSHIKI KAISHA

Patents By Year of Grant:	1619	360	518	543	770	868	940	959	926	972	973	934	892	1080	1054	13408
Patents By Year of Application:	2407	484	623	897	959	970	1078	973	930	969	1075	983	838	213	9	13408

## ---- Organizational Patenting

(Granted: Jan 01, 1969 - Dec 31, 1999) ---- Ranked List of Organizations with 1000 or More Patents ----

	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
--	-------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

## SIEMENS AKTIENGESELLSCHAFT

Patents By Year of Grant:	6388	410	539	562	658	508	475	398	371	376	419	418	454	626	722	13324
Patents By Year of Application:	7291	528	528	545	463	459	379	406	396	452	503	585	587	196	6	13324

## NEC CORPORATION

Patents By Year of Grant:	1601	234	375	353	480	437	428	453	594	897	1005	1043	1095	1627	1842	12464
Patents By Year of Application:	2268	311	360	461	469	420	610	885	774	1340	1224	1554	1453	324	11	12464

## BAYER AKTIENGESELLSCHAFT

Patents By Year of Grant:	6541	389	371	441	470	499	492	472	443	342	327	323	357	381	341	12189
Patents By Year of Application:	7297	408	385	448	518	482	392	416	351	331	383	385	298	87	8	12189

## WESTINGHOUSE ELECTRIC CORP.

Patents By Year of Grant:	7896	398	652	434	452	436	354	358	276	248	170	132	72	81	11	11970
Patents By Year of Application:	8892	390	392	445	403	375	305	228	194	182	86	53	25	0	0	11970

## MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.

Patents By Year of Grant:	3193	224	305	277	365	343	456	608	713	771	854	841	746	1034	1052	11782
Patents By Year of Application:	3726	286	291	342	451	592	747	780	845	914	928	940	760	172	8	11782

## UNITED STATES OF AMERICA, NAVY

Patents By Year of Grant:	7820	216	170	103	125	265	381	297	344	378	330	285	288	341	348	11691
Patents By Year of Application:	8553	83	84	160	195	350	313	351	342	297	318	299	267	75	4	11691

## GENERAL MOTORS CORPORATION

Patents By Year of Grant:	6781	294	370	383	412	379	437	399	438	331	282	297	277	305	275	11660
Patents By Year of Application:	7236	375	341	395	406	396	451	441	339	325	311	309	230	103	2	11660

## XEROX CORPORATION

Patents By Year of Grant:	5106	219	227	258	283	252	354	473	561	611	551	703	606	769	665	11638
Patents By Year of Application:	5545	201	252	267	335	485	560	583	647	675	695	645	502	237	9	11638

## FUJI PHOTO FILM CO., LTD

Patents By Year of Grant:	3092	448	494	589	892	768	733	641	632	545	504	510	467	547	539	11401
Patents By Year of Application:	4036	577	713	790	749	659	647	569	509	514	528	573	448	86	3	11401

## SONY CORPORATION

Patents By Year of Grant:	2235	227	332	303	320	238	299	419	565	656	754	855	859	1316	1410	10788
Patents By Year of Application:	2810	275	260	295	300	385	557	718	727	883	1098	1251	1048	170	11	10788

## DOW CHEMICAL COMPANY

Patents By Year of Grant:	5807	371	469	421	431	400	332	320	328	267	226	196	163	174	141	10046
Patents By Year of Application:	6571	451	363	400	387	313	288	270	262	227	220	154	112	28	0	10046

## ---- Organizational Patenting

(Granted: Jan 01, 1969 - Dec 31, 1999) ---- Ranked List of Organizations with 1000 or More Patents ----

	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
--	-------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

## FUJITSU LIMITED

Patents By Year of Grant:	1129	204	241	245	283	261	358	412	452	592	724	869	903	1189	1192	9054
Patents By Year of Application:	1598	194	242	261	356	435	543	597	672	991	1159	1073	773	157	3	9054

## TEXAS INSTRUMENTS, INCORPORATED

Patents By Year of Grant:	3018	178	277	195	400	285	373	394	369	479	527	600	607	611	598	8911
Patents By Year of Application:	3540	194	261	358	346	398	402	429	529	685	758	484	436	91	0	8911

## MINNESOTA MINING AND MANUFACTURING COMPANY

Patents By Year of Grant:	3183	232	256	279	381	323	365	388	414	519	564	537	548	554	317	8860
Patents By Year of Application:	3647	265	320	360	320	402	414	454	533	623	684	515	295	28	0	8860

## CIBA-GEIGY CORPORATION

Patents By Year of Grant:	4818	244	286	279	346	409	414	319	332	299	272	271	238	16	4	8547
Patents By Year of Application:	5310	294	324	384	359	351	317	289	290	308	279	41	1	0	0	8547

## BASF AKTIENGESELLSCHAFT

Patents By Year of Grant:	3617	250	263	297	354	394	384	396	360	318	301	317	276	399	414	8340
Patents By Year of Application:	4109	248	328	389	388	384	345	313	325	321	370	327	361	128	4	8340

## RCA CORPORATION

Patents By Year of Grant:	6768	484	504	129	2	0	1	0	0	0	0	0	0	0	0	7888
Patents By Year of Application:	7612	237	38	0	1	0	0	0	0	0	0	0	0	0	0	7888

## HOECHST AKTIENGESELLSCHAFT

Patents By Year of Grant:	3794	231	234	227	260	282	282	331	356	335	311	351	353	327	152	7826
Patents By Year of Application:	4252	237	233	298	299	282	296	366	329	366	489	215	151	13	0	7826

## PHILLIPS PETROLEUM COMPANY

Patents By Year of Grant:	5407	222	206	153	142	131	157	171	193	149	101	91	76	75	72	7346
Patents By Year of Application:	5848	147	116	126	127	181	169	171	116	92	118	59	56	19	1	7346

## UNITED STATES OF AMERICA, ARMY

Patents By Year of Grant:	5113	198	169	104	163	132	171	144	153	186	172	137	168	165	139	7314
Patents By Year of Application:	5496	113	93	125	155	139	148	178	179	175	190	165	116	42	0	7314

## ROBERT BOSCH GMBH

Patents By Year of Grant:	3197	241	262	223	200	204	261	278	363	316	312	306	267	348	419	7197
Patents By Year of Application:	3665	208	186	165	249	285	332	373	301	337	304	361	332	97	2	7197

## MOBIL OIL CORP.

Patents By Year of Grant:	3527	341	292	248	376	355	366	299	284	286	202	167	91	67	72	6973
Patents By Year of Application:	4098	231	335	347	363	309	323	282	236	204	135	46	46	16	2	6973

## ----- Technology Assessment and Forecast Report -----

ALL TECHNOLOGIES REPORT (PARTS A1, A2, B)

Page B - 4

## ---- Organizational Patenting

(Granted: Jan 01, 1969 - Dec 31, 1999) ---- Ranked List of Organizations with 1000 or More Patents ----

	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
--	-------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

## UNITED STATES OF AMERICA, DEPARTMENT OF ENERGY

Patents By Year of Grant:	4055	234	236	224	215	223	195	242	172	199	114	71	68	61	53	6362
Patents By Year of Application:	4527	208	168	203	227	210	220	172	164	77	69	62	43	12	0	6362

## HEWLETT-PACKARD COMPANY

Patents By Year of Grant:	918	77	130	153	242	218	318	344	338	428	470	501	530	805	850	6322
Patents By Year of Application:	1103	156	206	221	332	336	393	413	448	537	636	812	605	117	7	6322

## UNISYS CORPORATION

Patents By Year of Grant:	4800	181	136	97	95	82	99	85	51	80	112	133	109	122	91	6273
Patents By Year of Application:	5144	70	101	90	103	69	63	73	115	128	135	111	63	7	1	6273

## SHELL OIL COMPANY

Patents By Year of Grant:	3344	203	158	206	370	263	267	270	223	226	161	125	123	143	131	6213
Patents By Year of Application:	3673	189	262	292	255	272	244	233	197	168	149	140	96	43	0	6213

## NISSAN MOTOR COMPANY, LIMITED

Patents By Year of Grant:	2947	281	304	238	275	375	334	340	212	139	119	102	138	164	211	6179
Patents By Year of Application:	3528	254	212	326	348	317	283	159	109	119	150	173	147	53	1	6179

## SHARP KABUSHIKI KAISHA (SHARP CORPORATION)

Patents By Year of Grant:	764	189	284	237	339	350	385	393	373	454	388	352	395	560	521	5984
Patents By Year of Application:	1268	243	238	366	387	392	428	443	402	393	488	497	351	86	2	5984

## ALLIED-SIGNAL INC.

Patents By Year of Grant:	2737	249	285	245	274	246	250	319	245	270	196	189	119	140	147	5911
Patents By Year of Application:	3277	208	231	248	272	277	308	257	216	167	153	148	106	42	1	5911

## RICOH COMPANY, LTD.

Patents By Year of Grant:	1602	199	205	180	274	293	314	360	287	304	273	295	336	406	411	5739
Patents By Year of Application:	1989	183	184	306	333	382	306	316	290	334	360	379	283	90	4	5739

## EXXON RESEARCH + ENGINEERING CO.

Patents By Year of Grant:	4001	223	178	106	125	126	136	111	109	127	89	72	73	105	122	5703
Patents By Year of Application:	4397	114	116	95	124	129	119	105	109	86	97	77	93	40	2	5703

## FORD MOTOR COMPANY

Patents By Year of Grant:	2679	121	138	139	163	155	180	229	286	320	334	381	265	147	151	5688
Patents By Year of Application:	2903	116	175	154	146	212	246	303	394	360	344	155	124	53	3	5688

## SAMSUNG ELECTRONICS CO., LTD.

Patents By Year of Grant:	1	1	7	8	26	61	148	250	347	411	423	485	583	1304	1545	5600
Patents By Year of Application:	10	5	22	48	182	231	376	404	411	480	639	1414	1048	323	7	5600

----- Technology Assessment and Forecast Report -----

ALL TECHNOLOGIES REPORT (PARTS A1, A2, B)

Page B - 5

#### ----- Organizational Patenting

(Granted: Jan 01, 1969 - Dec 31, 1999) ---- Ranked List of Organizations with 1000 or More Patents ----

	Pre 1986 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 TOTAL																		
<b>HONDA GIKEN KOGYO KABUSHIKI KAISHA (HONDA MOTOR CO., LTD.)</b>																			
Patents By Year of Grant:	1188	280	395	365	352	366	245	195	243	223	248	293	341	389	461	5584			
Patents By Year of Application:	1786	345	361	340	317	185	217	254	239	299	399	347	358	136	1	5584			
<b>TOYOTA JIDOSHA K.K.</b>																			
Patents By Year of Grant:	2295	228	376	306	274	152	149	149	145	132	156	158	211	387	402	5520			
Patents By Year of Application:	2787	357	238	173	152	160	138	155	153	162	206	381	380	77	1	5520			
<b>MONSANTO COMPANY, INC.</b>																			
Patents By Year of Grant:	4148	111	91	76	88	84	129	129	103	76	75	82	97	77	83	5449			
Patents By Year of Application:	4367	78	65	93	125	115	95	86	82	81	110	69	67	16	0	5449			
<b>UNITED TECHNOLOGIES CORPORATION</b>																			
Patents By Year of Grant:	2890	191	206	189	232	152	164	235	205	203	214	159	123	116	107	5386			
Patents By Year of Application:	3284	171	211	199	169	177	226	217	200	206	134	102	72	18	0	5386			
<b>IMPERIAL CHEMICAL INDUSTRIES PLC</b>																			
Patents By Year of Grant:	3398	110	110	162	157	178	181	189	232	128	93	66	61	63	44	5172			
Patents By Year of Application:	3649	138	151	172	208	158	193	168	89	72	83	56	24	10	1	5172			
<b>HUGHES AIRCRAFT COMPANY</b>																			
Patents By Year of Grant:	1938	98	183	216	298	252	350	296	327	411	323	272	130	50	6	5150			
Patents By Year of Application:	2262	220	218	277	290	309	347	412	344	252	168	48	3	0	0	5150			
<b>AMERICAN CYANAMID COMPANY</b>																			
Patents By Year of Grant:	3340	92	107	101	114	136	106	126	135	148	98	106	107	112	111	4939			
Patents By Year of Application:	3570	111	110	100	86	129	125	135	142	107	179	45	67	30	3	4939			
<b>PROCTER + GAMBLE COMPANY</b>																			
Patents By Year of Grant:	1720	75	127	92	143	127	146	156	155	205	226	346	406	454	550	4928			
Patents By Year of Application:	1908	100	137	115	137	146	148	181	241	335	445	507	408	113	7	4928			
<b>ROCKWELL INTERNATIONAL CORPORATION</b>																			
Patents By Year of Grant:	3111	161	158	134	123	115	152	124	136	150	117	119	75	77	67	4819			
Patents By Year of Application:	3441	128	110	118	148	126	146	137	133	111	119	56	41	5	0	4819			
<b>CATERPILLAR INC.</b>																			
Patents By Year of Grant:	3152	46	54	44	58	52	76	60	107	107	143	206	212	197	262	4776			
Patents By Year of Application:	3232	53	44	44	54	86	84	117	133	203	226	254	191	54	1	4776			
<b>UNION CARBIDE CORPORATION</b>																			
Patents By Year of Grant:	3901	208	159	141	132	43	8	0	0	0	0	0	0	0	0	4592			
Patents By Year of Application:	4251	138	107	64	32	0	0	0	0	0	0	0	0	0	0	0	4592		

## ---- Organizational Patenting

(Granted: Jan 01, 1969 - Dec 31, 1999) ---- Ranked List of Organizations with 1000 or More Patents ----

	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
--	-------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

## UNITED STATES OF AMERICA, NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Patents By Year of Grant:	2790	93	122	93	127	128	151	151	166	160	122	104	96	95	93	4491
Patents By Year of Application:	2979	93	96	145	139	137	170	159	167	123	108	86	77	11	1	4491

## UOP

Patents By Year of Grant:	3100	63	73	68	161	120	99	103	115	103	109	97	60	88	107	4466
Patents By Year of Application:	3210	80	127	137	94	99	98	124	95	128	82	75	83	34	0	4466

## MERCK + CO., INC.

Patents By Year of Grant:	2297	103	123	125	173	134	152	164	222	163	125	126	161	178	216	4462
Patents By Year of Application:	2546	108	138	123	134	163	201	226	128	159	153	134	187	59	3	4462

## HONEYWELL INC.

Patents By Year of Grant:	2343	154	169	147	213	167	162	137	139	167	173	126	100	123	128	4448
Patents By Year of Application:	2655	149	144	198	175	150	154	155	183	130	113	126	103	13	0	4448

## OLYMPUS OPTICAL CO., LTD.

Patents By Year of Grant:	1566	146	146	180	196	179	161	197	203	228	210	223	213	278	222	4348
Patents By Year of Application:	1860	132	170	182	176	204	223	221	274	254	254	198	160	39	1	4348

## UNITED STATES OF AMERICA, AIR FORCE

Patents By Year of Grant:	2613	180	186	115	137	101	135	139	132	131	80	99	86	79	90	4303
Patents By Year of Application:	2969	143	108	113	107	144	130	125	105	94	94	80	66	24	1	4303

## TEXACO INC.

Patents By Year of Grant:	2997	140	146	96	126	115	100	107	109	87	107	65	25	34	35	4289
Patents By Year of Application:	3241	128	111	104	95	113	110	101	94	85	44	27	27	9	0	4289

## MINOLTA CAMERA CO., LTD.

Patents By Year of Grant:	1116	70	99	171	350	376	315	282	237	160	114	164	158	304	365	4281
Patents By Year of Application:	1286	113	256	400	382	290	266	185	139	167	179	244	272	95	7	4281

## PPG INDUSTRIES INC.

Patents By Year of Grant:	2629	124	118	118	112	100	94	69	83	60	52	51	74	97	44	3825
Patents By Year of Application:	2835	130	121	103	88	86	81	47	65	66	78	71	53	1	0	3825

## NIKON CORPORATION

Patents By Year of Grant:	846	69	119	79	69	73	84	104	132	113	224	423	479	575	365	3754
Patents By Year of Application:	1010	77	54	65	90	85	138	121	172	380	614	480	397	68	3	3754

## BRISTOL-MYERS SQUIBB COMPANY

Patents By Year of Grant:	1995	105	125	120	116	123	124	129	119	100	96	102	134	137	146	3671
Patents By Year of Application:	2226	110	116	105	120	148	113	121	129	109	138	108	87	36	5	3671

## Technology Assessment and Forecast Report

ALL TECHNOLOGIES REPORT (PARTS A1, A2, B)

Page B - 7

## Organizational Patenting

(Granted: Jan 01, 1969 - Dec 31, 1999) Ranked List of Organizations with 1000 or More Patents

	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
--	-------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

## AMP INCORPORATED

Patents By Year of Grant:	2022	126	216	204	243	224	267	231	129	2	0	1	0	0	0	3665
Patents By Year of Application:	2294	196	179	201	246	225	212	111	0	1	0	0	0	0	0	3665

## EATON CORPORATION

Patents By Year of Grant:	1520	126	123	103	140	143	114	141	134	148	165	182	145	164	222	3570
Patents By Year of Application:	1741	89	132	127	121	134	133	153	185	186	143	172	163	89	2	3570

## GTE PRODUCTS CORPORATION

Patents By Year of Grant:	2453	129	133	142	168	125	148	94	79	35	8	2	0	3	1	3520
Patents By Year of Application:	2676	137	125	165	136	111	99	62	7	2	0	0	0	0	0	3520

## HOFFMANN-LA ROCHE INC.

Patents By Year of Grant:	2339	84	86	59	93	78	78	72	87	89	103	106	79	72	70	3495
Patents By Year of Application:	2507	70	72	93	85	79	60	92	89	119	96	53	56	21	3	3495

## SUMITOMO CHEMICAL COMPANY, LIMITED

Patents By Year of Grant:	1636	87	97	123	147	114	146	130	147	164	139	138	123	148	136	3475
Patents By Year of Application:	1819	114	133	130	140	121	134	158	145	176	148	125	101	31	0	3475

## BOEING COMPANY

Patents By Year of Grant:	1420	138	169	168	214	192	197	182	106	80	93	97	114	157	147	3474
Patents By Year of Application:	1800	138	168	206	202	158	129	86	91	67	193	134	79	22	1	3474

## FMC CORPORATION

Patents By Year of Grant:	2316	70	74	68	68	76	78	77	80	71	53	70	71	97	80	3349
Patents By Year of Application:	2445	77	63	67	79	72	94	58	72	72	75	81	75	18	1	3349

## INTEL CORPORATION

Patents By Year of Grant:	178	15	24	33	49	45	56	73	125	203	271	423	405	701	733	3334
Patents By Year of Application:	212	25	52	49	50	74	113	207	313	441	588	698	448	63	1	3334

## NIPPONDENSO CO., LTD.

Patents By Year of Grant:	1030	122	184	124	116	76	76	86	123	161	183	311	312	308	99	3311
Patents By Year of Application:	1312	125	113	82	82	74	108	162	202	265	382	349	48	6	1	3311

## KONICA CORPORATION

Patents By Year of Grant:	881	117	105	124	173	211	226	203	222	228	177	155	125	166	159	3272
Patents By Year of Application:	1090	111	152	181	197	248	223	196	186	187	159	157	138	46	1	3272

## ELI LILLY AND COMPANY

Patents By Year of Grant:	1563	82	85	68	75	73	66	63	79	77	147	245	222	180	189	3214
Patents By Year of Application:	1763	62	52	64	60	68	65	98	151	152	355	99	159	60	6	3214

---- Technology Assessment and Forecast Report ----

ALL TECHNOLOGIES REPORT (PARTS A1, A2, B)

Page B - 8

---- Organizational Patenting

(Granted: Jan 01, 1969 - Dec 31, 1999) ---- Ranked List of Organizations with 1000 or More Patents ----

	Pre															
	1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL

CHEVRON RESEARCH & TECHNOLOGY CO.

Patents By Year of Grant:	2310	161	133	92	75	59	77	85	73	64	24	5	5	0	1	3164
Patents By Year of Application:	2587	108	79	44	62	101	64	72	36	8	2	1	0	0	0	3164

ITT CORPORATION

Patents By Year of Grant:	2368	99	73	33	56	57	59	62	61	79	81	62	34	22	11	3157
Patents By Year of Application:	2549	22	46	44	58	66	71	70	88	70	54	13	5	1	0	3157

DAIMLER-BENZ AKTIENGESELLSCHAFT

Patents By Year of Grant:	1411	77	93	100	134	107	107	97	120	95	104	129	159	241	174	3148
Patents By Year of Application:	1551	97	100	114	116	101	104	111	107	141	172	215	189	30	0	3148

LUCENT TECHNOLOGIES INC.

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	289	768	928	1152	3137
Patents By Year of Application:	0	0	0	0	0	1	9	11	56	373	871	831	754	217	14	3137

POLAROID CORPORATION

Patents By Year of Grant:	2284	83	91	66	87	51	36	39	39	40	55	59	60	60	54	3104
Patents By Year of Application:	2455	61	74	61	41	32	50	30	47	72	67	58	45	11	0	3104

UPJOHN COMPANY

Patents By Year of Grant:	2703	66	26	15	30	26	23	31	30	23	23	33	21	1	1	3052
Patents By Year of Application:	2798	24	21	21	25	24	31	27	30	26	23	2	0	0	0	3052

TRW INC.

Patents By Year of Grant:	1750	68	77	56	74	52	40	50	82	104	96	98	101	144	200	2992
Patents By Year of Application:	1888	57	61	63	47	43	84	111	89	80	125	162	137	43	2	2992

GOODYEAR TIRE + RUBBER COMPANY

Patents By Year of Grant:	1841	67	80	82	83	83	88	64	82	82	64	70	93	108	73	2960
Patents By Year of Application:	1981	70	73	81	86	82	75	79	60	71	95	96	85	26	0	2960

THOMSON-CSF

Patents By Year of Grant:	1507	121	131	129	104	114	138	107	90	84	90	52	52	66	67	2852
Patents By Year of Application:	1792	99	92	105	131	120	99	94	74	67	71	51	43	14	0	2852

BENDIX CORPORATION(NOW ALLIED-SIGNAL INC.)

Patents By Year of Grant:	2825	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2825
Patents By Year of Application:	2825	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2825

UNIVERSITY OF CALIFORNIA, THE REGENTS OF

Patents By Year of Grant:	427	54	65	59	79	63	83	79	113	161	213	266	275	395	436	2768
Patents By Year of Application:	572	62	65	67	89	92	115	131	245	318	422	314	226	47	3	2768

---- Technology Assessment and Forecast Report ----

ALL TECHNOLOGIES REPORT (PARTS A1, A2, B)

Page B - 9

---- Organizational Patenting

(Granted: Jan 01, 1969 - Dec 31, 1999) ---- Ranked List of Organizations with 1000 or More Patents ----

Pre

	1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
--	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

CORNING INCORPORATED

Patents By Year of Grant:	1685	47	54	74	55	83	59	82	102	104	72	85	78	72	102	2754
Patents By Year of Application:	1780	54	61	65	76	72	90	107	94	101	92	50	79	30	3	2754

ADVANCED MICRO DEVICES, INC.

Patents By Year of Grant:	69	53	92	82	87	83	83	71	85	86	129	179	271	556	824	2750
Patents By Year of Application:	230	93	54	74	93	100	55	89	127	189	381	521	616	119	9	2750

W. R. GRACE & CO.-CONN.

Patents By Year of Grant:	1544	43	44	61	111	105	121	129	122	116	86	85	73	56	28	2724
Patents By Year of Application:	1626	57	97	117	116	114	135	100	110	70	114	40	24	4	0	2724

SUMITOMO ELECTRIC INDUSTRIES CO., LTD.

Patents By Year of Grant:	454	81	91	95	142	126	131	178	232	233	233	209	172	158	162	2697
Patents By Year of Application:	633	79	110	145	134	145	204	271	205	257	239	129	121	25	0	2697

ASAHI KOGAKU KOGYO KABUSHIKI KAISHA

Patents By Year of Grant:	664	45	32	42	53	104	151	172	209	204	136	168	151	270	278	2679
Patents By Year of Application:	739	29	45	87	153	191	200	209	149	186	176	211	228	75	1	2679

HOECHST CELANESE CORPORATION

Patents By Year of Grant:	1311	66	71	109	134	188	128	133	113	93	78	72	75	68	25	2664
Patents By Year of Application:	1445	107	128	141	148	136	120	99	77	79	92	59	32	1	0	2664

OLIN CORPORATION

Patents By Year of Grant:	1709	81	58	60	80	74	105	114	72	74	47	56	28	21	14	2593
Patents By Year of Application:	1853	57	61	61	92	119	83	73	64	52	44	17	14	3	0	2593

AISIN SEIKI KABUSHIKI KAISHA

Patents By Year of Grant:	955	113	134	140	158	133	162	131	94	71	62	91	73	116	137	2570
Patents By Year of Application:	1177	114	150	150	131	156	112	80	72	81	87	117	108	35	0	2570

PIONEER ELECTRONIC CORPORATION

Patents By Year of Grant:	522	85	100	96	166	154	180	235	220	173	148	101	110	141	139	2570
Patents By Year of Application:	731	59	131	179	177	231	206	191	149	123	110	144	116	22	1	2570

AGFA-GEVAERT, AG

Patents By Year of Grant:	1948	55	31	44	64	52	53	33	36	40	39	19	39	50	54	2557
Patents By Year of Application:	2030	33	62	55	46	36	35	42	34	38	48	38	47	12	1	2557

MICRON TECHNOLOGY, INC.

Patents By Year of Grant:	1	0	0	0	11	34	77	114	172	105	63	125	318	581	933	2534
Patents By Year of Application:	1	0	0	27	37	109	143	173	75	91	371	580	675	224	28	2534

## Technology Assessment and Forecast Report

ALL TECHNOLOGIES REPORT (PARTS A1, A2, B)

Page B - 10

## Organizational Patenting

(Granted: Jan 01, 1969 - Dec 31, 1999) Ranked List of Organizations with 1000 or More Patents

	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
--	-------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

## AMOCO CORPORATION

Patents By Year of Grant:	951	90	110	165	199	188	149	185	141	87	56	67	55	67	16	2526
Patents By Year of Application:	1182	117	171	198	178	172	151	88	69	64	71	42	22	1	0	2526

## PFIZER INC.

Patents By Year of Grant:	1299	72	67	63	79	82	91	81	66	76	75	83	102	117	112	2465
Patents By Year of Application:	1422	68	57	82	92	96	69	87	81	114	102	68	97	29	1	2465

## NCR CORPORATION

Patents By Year of Grant:	1125	61	107	79	112	84	92	86	98	90	50	39	80	167	189	2459
Patents By Year of Application:	1282	77	87	98	110	100	111	90	61	33	109	155	132	14	0	2459

## DEERE + COMPANY

Patents By Year of Grant:	1299	73	106	85	101	89	91	62	85	57	67	64	55	70	84	2388
Patents By Year of Application:	1430	103	82	81	83	80	76	77	72	61	69	63	76	31	4	2388

## ATLANTIC RICHFIELD COMPANY

Patents By Year of Grant:	1462	110	142	78	74	65	61	57	66	68	60	37	27	34	41	2382
Patents By Year of Application:	1664	110	58	65	69	66	61	66	68	46	42	31	26	10	0	2382

## ABBOTT LABORATORIES

Patents By Year of Grant:	850	29	30	39	39	64	80	128	127	144	116	182	189	164	149	2330
Patents By Year of Application:	906	43	47	59	94	87	138	129	137	153	274	152	90	21	0	2330

## DOW CORNING CORPORATION

Patents By Year of Grant:	876	69	58	82	105	122	135	144	93	132	106	107	88	108	105	2330
Patents By Year of Application:	970	84	83	111	145	139	114	107	123	121	107	106	83	35	2	2330

## BROTHER KOGYO KABUSHIKI KAISHA

Patents By Year of Grant:	146	32	66	81	156	178	261	217	165	155	117	133	149	209	263	2328
Patents By Year of Application:	231	74	138	156	192	272	181	174	131	163	158	235	157	62	4	2328

## NORTHERN TELECOM LIMITED

Patents By Year of Grant:	795	84	117	98	98	75	78	68	73	84	82	103	64	199	240	2258
Patents By Year of Application:	980	81	90	76	91	80	66	66	112	92	106	236	168	14	0	2258

## COMMISSARIAT A L'ENERGIE ATOMIQUE

Patents By Year of Grant:	1170	91	126	90	82	70	49	69	51	62	40	69	79	88	81	2217
Patents By Year of Application:	1381	76	73	92	46	61	61	54	51	70	83	93	67	9	0	2217

## LUCAS INDUSTRIES PUBLIC LTD. COMPANY

Patents By Year of Grant:	1351	75	83	65	90	72	74	40	40	33	48	50	54	58	50	2183
Patents By Year of Application:	1477	74	80	77	67	60	44	35	39	56	60	57	42	15	0	2183

## ---- Organizational Patenting

(Granted: Jan 01, 1969 - Dec 31, 1999) ---- Ranked List of Organizations with 1000 or More Patents ----

	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
--	-------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

## COLGATE-PALMOLIVE COMPANY

Patents By Year of Grant:	1199	46	48	54	90	60	69	53	52	52	65	71	66	110	138	2173
Patents By Year of Application:	1289	68	61	68	75	55	57	41	60	85	54	105	99	44	12	2173

## DIGITAL EQUIPMENT CORPORATION

Patents By Year of Grant:	145	25	22	45	123	125	141	220	264	269	189	164	133	164	133	2162
Patents By Year of Application:	202	33	132	134	217	195	218	264	206	170	146	138	88	19	0	2162

## RAYTHEON COMPANY

Patents By Year of Grant:	1145	45	81	46	60	80	85	85	72	51	45	10	20	117	219	2161
Patents By Year of Application:	1300	51	52	67	87	64	89	41	49	22	31	115	164	28	1	2161

## SANYO ELECTRIC CO., LTD.

Patents By Year of Grant:	306	73	96	80	96	111	133	117	119	123	115	130	164	251	239	2153
Patents By Year of Application:	463	72	82	113	127	135	112	104	142	159	173	245	180	45	1	2153

## MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Patents By Year of Grant:	727	45	63	64	101	109	101	125	112	99	104	119	102	138	142	2151
Patents By Year of Application:	858	78	84	102	130	110	107	96	114	144	126	105	79	18	0	2151

## MAZDA MOTOR CORPORATION

Patents By Year of Grant:	439	86	138	149	141	133	200	203	173	133	108	59	62	66	56	2146
Patents By Year of Application:	617	132	142	137	158	212	208	147	130	107	51	56	42	7	0	2146

## AMERICAN HOME PRODUCTS CORPORATION

Patents By Year of Grant:	1363	38	46	69	78	66	46	56	66	31	58	96	34	50	47	2144
Patents By Year of Application:	1431	63	72	48	66	44	61	58	44	72	92	36	31	25	1	2144

## WARNER-LAMBERT COMPANY

Patents By Year of Grant:	833	101	118	113	117	108	120	92	85	79	81	66	87	62	80	2142
Patents By Year of Application:	1028	128	108	110	99	108	81	69	84	96	103	37	54	35	2	2142

## OWENS-ILLINOIS INC.

Patents By Year of Grant:	2026	60	37	1	0	0	0	0	0	0	1	0	0	0	1	2126
Patents By Year of Application:	2108	16	0	0	0	0	0	1	0	0	0	0	1	0	0	2126

## FUJI XEROX CO., LTD.

Patents By Year of Grant:	334	52	34	41	43	57	73	116	137	159	182	172	182	277	248	2107
Patents By Year of Application:	421	26	54	62	66	137	127	160	180	160	234	267	179	33	1	2107

## UNITED STATES OF AMERICA, DEPARTMENT OF AGRICULTURE

Patents By Year of Grant:	1436	32	29	35	43	49	46	53	54	38	49	41	46	75	70	2096
Patents By Year of Application:	1499	33	39	43	57	56	58	38	44	47	63	62	45	11	1	2096

---- Technology Assessment and Forecast Report ----

ALL TECHNOLOGIES REPORT (PARTS A1, A2, B)

Page B - 12

---- Organizational Patenting

(Granted: Jan 01, 1969 - Dec 31, 1999) ---- Ranked List of Organizations with 1000 or More Patents ----

	Pre															
	1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL

SINGER COMPANY

Patents By Year of Grant:	1988	37	32	23	1	0	0	0	0	0	0	0	0	0	0	2081
Patents By Year of Application:	2045	24	9	3	0	0	0	0	0	0	0	0	0	0	0	2081

SMITHKLINE BECKMAN CORPORATION

Patents By Year of Grant:	1622	28	54	56	62	29	13	31	19	27	36	27	21	24	21	2070
Patents By Year of Application:	1708	47	57	31	29	17	30	34	22	28	32	17	15	3	0	2070

NATIONAL SEMICONDUCTOR CORPORATION

Patents By Year of Grant:	404	35	41	34	60	59	95	103	119	149	186	201	188	178	197	2049
Patents By Year of Application:	475	27	51	58	85	110	110	156	156	216	257	159	141	46	2	2049

L'OREAL S.A.

Patents By Year of Grant:	633	32	51	47	92	74	85	71	79	70	72	126	165	182	259	2038
Patents By Year of Application:	735	53	72	80	68	67	75	70	80	129	206	181	170	47	5	2038

STAUFFER CHEMICAL COMPANY

Patents By Year of Grant:	1724	75	94	69	36	0	2	0	1	0	0	0	0	0	0	2001
Patents By Year of Application:	1876	72	39	12	1	1	0	0	0	0	0	0	0	0	0	2001

ETHYL CORPORATION

Patents By Year of Grant:	1223	77	48	51	87	109	118	95	88	51	8	12	14	10	8	1999
Patents By Year of Application:	1350	49	52	100	118	97	93	70	26	6	17	9	8	4	0	1999

ROHM AND HAAS COMPANY

Patents By Year of Grant:	1038	33	22	18	32	32	49	65	117	129	117	97	63	71	85	1968
Patents By Year of Application:	1106	26	20	23	49	73	98	109	121	97	93	56	63	34	0	1968

CHRYSLER MOTORS CORPORATION

Patents By Year of Grant:	488	38	77	65	89	113	89	49	66	101	116	152	139	166	215	1963
Patents By Year of Application:	555	70	65	112	92	84	54	89	116	153	161	196	159	56	1	1963

AIR PRODUCTS AND CHEMICALS, INC.

Patents By Year of Grant:	682	61	85	70	119	98	119	90	110	124	73	78	71	80	86	1946
Patents By Year of Application:	784	87	94	114	99	103	101	124	90	90	78	71	77	34	0	1946

VICTOR COMPANY OF JAPAN, LIMITED

Patents By Year of Grant:	805	130	144	88	62	54	91	82	79	68	48	61	63	77	79	1931
Patents By Year of Application:	1062	95	56	55	85	98	73	73	50	63	72	86	53	10	0	1931

B. F. GOODRICH CO.

Patents By Year of Grant:	1211	52	60	75	78	57	73	69	59	46	29	33	17	29	27	1915
Patents By Year of Application:	1320	54	71	75	96	51	43	59	38	30	29	22	24	3	0	1915

## ---- Organizational Patenting

(Granted: Jan 01, 1969 - Dec 31, 1999) ---- Ranked List of Organizations with 1000 or More Patents ----

	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
--	-------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

## SEIKO EPSON CORPORATION

Patents By Year of Grant:	0	27	41	33	46	55	92	133	169	148	146	179	225	312	302	1908
Patents By Year of Application:	65	31	42	55	105	135	153	169	182	208	283	254	177	47	2	1908

## PITNEY-BOWES, INC.

Patents By Year of Grant:	699	66	65	49	111	86	74	100	90	82	91	70	84	120	94	1881
Patents By Year of Application:	849	56	80	83	77	97	92	87	89	118	97	100	50	6	0	1881

## OWENS-CORNING FIBERGLAS CORPORATION

Patents By Year of Grant:	1364	57	46	35	37	17	15	15	14	20	11	35	64	68	67	1865
Patents By Year of Application:	1463	36	29	30	11	17	13	14	16	38	65	72	47	14	0	1865

## BAXTER INTERNATIONAL INC.

Patents By Year of Grant:	837	44	67	63	87	64	70	59	65	75	61	70	66	96	101	1825
Patents By Year of Application:	951	71	68	70	72	57	62	68	83	78	99	70	64	12	0	1825

## TAKEDA CHEMICAL INDUSTRIES LTD.

Patents By Year of Grant:	805	57	57	58	79	87	50	66	92	68	70	99	77	72	80	1817
Patents By Year of Application:	933	57	69	73	85	61	72	71	84	93	93	72	46	6	2	1817

## HARRIS CORP.

Patents By Year of Grant:	696	54	89	51	73	73	58	59	62	66	69	91	115	124	120	1800
Patents By Year of Application:	841	53	57	65	64	59	73	82	53	113	115	120	83	22	0	1800

## INSTITUT FRANCAIS DU PETROLE

Patents By Year of Grant:	740	35	55	63	64	72	82	56	71	89	73	69	86	142	102	1799
Patents By Year of Application:	843	58	52	69	71	68	64	84	84	74	110	110	92	20	0	1799

## YAZAKI CORP.

Patents By Year of Grant:	22	5	11	34	76	99	65	112	124	119	115	171	238	290	307	1788
Patents By Year of Application:	30	25	50	72	91	73	143	116	142	187	217	310	255	75	2	1788

## LEVER BROS. CO., DIVISION OF CONOPCO, INC.

Patents By Year of Grant:	980	56	50	47	48	59	59	59	44	58	70	58	53	64	68	1773
Patents By Year of Application:	1085	34	51	58	64	58	52	38	74	58	69	73	53	6	0	1773

## NATIONAL RESEARCH DEVELOPMENT CORPORATION

Patents By Year of Grant:	1275	77	84	48	83	59	57	59	17	3	1	0	1	1	1	1766
Patents By Year of Application:	1427	72	61	64	57	54	25	2	1	1	2	0	0	0	0	1766

## TEKTRONIX INC.

Patents By Year of Grant:	560	91	137	173	143	91	80	66	59	39	60	61	50	66	80	1756
Patents By Year of Application:	770	164	119	111	96	66	65	59	51	60	68	50	64	13	0	1756

## ---- Organizational Patenting

(Granted: Jan 01, 1969 - Dec 31, 1999) ---- Ranked List of Organizations with 1000 or More Patents ----

	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
--	-------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

## INTERNATIONAL STANDARD ELECTRIC CORPORATION(ITT CORP. UNIT)

Patents By Year of Grant:	1611	80	46	3	0	1	0	0	0	0	0	0	0	0	0	1741
Patents By Year of Application:	1738	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1741

## MURATA MANUFACTURING CO., LTD.

Patents By Year of Grant:	186	48	52	69	62	69	90	83	66	103	118	151	150	217	268	1732
Patents By Year of Application:	271	63	55	76	79	81	70	97	120	168	163	226	212	50	1	1732

## HALLIBURTON CO.

Patents By Year of Grant:	715	94	120	69	68	53	60	61	74	162	88	94	38	25	1	1722
Patents By Year of Application:	883	86	49	67	68	50	76	131	131	82	65	27	7	0	0	1722

## ZENITH ELECTRONICS CORPORATION

Patents By Year of Grant:	1013	66	90	80	59	55	56	60	42	34	28	32	31	26	22	1694
Patents By Year of Application:	1160	66	71	51	52	58	55	48	26	28	30	31	18	0	0	1694

## BRIDGESTONE CORPORATION

Patents By Year of Grant:	525	53	51	79	90	83	75	90	98	93	92	73	74	85	109	1670
Patents By Year of Application:	623	58	92	90	83	91	97	103	69	83	98	89	71	20	3	1670

## ALPS ELECTRIC CO., LTD.

Patents By Year of Grant:	340	100	152	198	138	90	83	78	46	36	42	39	76	99	151	1668
Patents By Year of Application:	549	174	152	102	94	70	60	46	40	52	71	106	124	27	1	1668

## TELEFONAKTIEBOLAGET LM ERICSSON

Patents By Year of Grant:	417	38	38	33	28	24	28	36	46	66	80	151	113	204	365	1667
Patents By Year of Application:	488	35	20	25	25	52	56	56	93	132	209	214	225	37	0	1667

## SHIN ETSU CHEMICAL CO., LTD.

Patents By Year of Grant:	249	40	50	63	52	63	113	134	166	160	142	134	97	96	97	1656
Patents By Year of Application:	314	60	49	61	105	144	123	156	144	160	141	98	77	24	0	1656

## CONOCO, INC.

Patents By Year of Grant:	1211	42	30	62	52	52	55	49	37	19	13	11	7	7	7	1654
Patents By Year of Application:	1281	39	46	63	41	53	52	28	15	13	7	7	7	2	0	1654

## HENKEL KOMMANDITGESELLSCHAFT AUF AKTIEN(HENKEL KGAA)

Patents By Year of Grant:	429	58	89	103	130	117	65	44	68	101	100	108	71	85	83	1651
Patents By Year of Application:	566	90	125	129	87	34	59	92	88	119	86	105	60	11	0	1651

## SANDOZ LTD.

Patents By Year of Grant:	1011	42	51	53	60	35	52	41	47	43	44	84	57	20	10	1650
Patents By Year of Application:	1110	49	48	48	44	46	49	39	47	65	81	16	8	0	0	1650

## Technology Assessment and Forecast Report

ALL TECHNOLOGIES REPORT (PARTS A1, A2, B)

Page B - 15

## Organizational Patenting

(Granted: Jan 01, 1969 - Dec 31, 1999) Ranked List of Organizations with 1000 or More Patents

	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
--	-------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

## DRESSER INDUSTRIES, INC.

Patents By Year of Grant:	1172	65	69	49	40	25	36	28	20	22	12	14	24	24	43	1643
Patents By Year of Application:	1291	45	44	36	18	39	24	18	13	22	23	27	29	12	2	1643

## NIPPON STEEL CORP.

Patents By Year of Grant:	652	53	48	54	78	57	62	74	80	79	84	72	89	94	67	1643
Patents By Year of Application:	740	55	58	61	49	96	89	77	79	80	100	93	59	7	0	1643

## ILLINOIS TOOL WORKS INC.

Patents By Year of Grant:	817	40	37	37	21	39	44	53	72	34	56	72	92	120	97	1631
Patents By Year of Application:	882	33	29	24	36	59	52	59	51	80	98	102	90	34	2	1631

## ALUMINUM COMPANY OF AMERICA

Patents By Year of Grant:	794	75	80	74	61	60	67	52	64	57	44	53	31	53	49	1614
Patents By Year of Application:	936	78	67	63	63	54	61	46	55	51	49	45	34	12	0	1614

## UNITED STATES OF AMERICA, HEALTH &amp; HUMAN SERVICES

Patents By Year of Grant:	467	28	34	27	34	37	48	76	85	107	96	117	150	169	139	1614
Patents By Year of Application:	538	34	37	55	67	79	92	123	120	169	185	56	55	4	0	1614

## BECTON, DICKINSON AND COMPANY

Patents By Year of Grant:	467	40	61	38	74	54	62	58	56	82	66	99	133	157	131	1578
Patents By Year of Application:	580	41	54	60	44	64	51	72	95	109	119	138	119	31	1	1578

## HERCULES INCORPORATED

Patents By Year of Grant:	1026	43	50	32	47	35	63	38	30	33	25	41	35	31	22	1551
Patents By Year of Application:	1100	45	43	50	49	47	38	31	21	44	34	31	12	6	0	1551

## SUN MICROSYSTEMS, INC.

Patents By Year of Grant:	3	0	2	3	7	13	21	53	64	69	63	113	152	423	560	1546
Patents By Year of Application:	7	3	3	14	36	52	54	74	63	113	288	476	320	41	2	1546

## CARRIER CORPORATION

Patents By Year of Grant:	813	36	33	44	48	48	72	56	51	57	59	50	40	65	61	1533
Patents By Year of Application:	873	45	40	43	53	63	62	46	62	63	53	61	44	25	0	1533

## ASAHI KASEI KOGYO KABUSHIKI KAISHA

Patents By Year of Grant:	907	48	51	53	52	38	33	34	57	54	34	29	29	50	61	1530
Patents By Year of Application:	1006	50	48	41	48	33	52	40	33	41	29	44	52	13	0	1530

## SCHLUMBERGER TECHNOLOGY CORPORATION

Patents By Year of Grant:	764	39	43	38	68	63	58	50	57	66	49	56	48	45	80	1524
Patents By Year of Application:	860	34	40	44	68	70	61	52	55	63	51	53	60	13	0	1524

---- Technology Assessment and Forecast Report ----

ALL TECHNOLOGIES REPORT (PARTS A1, A2, B)

Page B - 16

---- Organizational Patenting

(Granted: Jan 01, 1969 - Dec 31, 1999) ---- Ranked List of Organizations with 1000 or More Patents ----

	Pre															
	1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL

KIMBERLY-CLARK CORPORATION

Patents By Year of Grant:	567	60	93	76	91	69	42	58	47	65	80	141	101	21	9	1520
Patents By Year of Application:	707	92	78	63	56	63	43	59	80	120	125	31	3	0	0	1520

MCDONNELL DOUGLAS CORP.

Patents By Year of Grant:	833	30	30	31	22	34	44	33	38	26	39	43	52	111	138	1504
Patents By Year of Application:	900	24	22	35	33	49	41	27	21	52	51	109	117	23	0	1504

OKI ELECTRIC INDUSTRY CO., LTD.

Patents By Year of Grant:	176	31	58	64	115	82	96	111	113	101	80	78	67	120	200	1492
Patents By Year of Application:	262	45	85	110	96	97	142	86	82	93	102	97	156	39	0	1492

UNION OIL COMPANY OF CALIFORNIA

Patents By Year of Grant:	804	69	59	70	75	57	91	88	54	47	27	11	15	14	8	1489
Patents By Year of Application:	954	63	54	72	79	71	64	50	34	19	16	5	7	1	0	1489

YAMAHA CORPORATION

Patents By Year of Grant:	0	0	0	8	87	104	98	101	150	113	133	149	140	198	208	1489
Patents By Year of Application:	2	8	71	90	136	137	107	119	138	138	158	186	151	47	1	1489

COMBUSTION ENGINEERING INC.

Patents By Year of Grant:	989	60	59	44	35	21	18	19	48	59	26	19	15	35	21	1468
Patents By Year of Application:	1099	45	36	28	16	18	22	65	45	29	16	23	20	6	0	1468

SUNDSTRAND CORPORATION

Patents By Year of Grant:	300	80	89	82	132	157	196	120	66	57	30	45	29	45	35	1463
Patents By Year of Application:	459	87	98	156	226	130	70	49	51	38	27	40	25	7	0	1463

MITSUBISHI JUKOGYO KABUSHIKI KAISHA

Patents By Year of Grant:	537	51	88	59	59	65	62	85	85	69	65	61	57	58	32	1433
Patents By Year of Application:	647	72	54	53	79	60	101	80	58	60	72	71	24	2	0	1433

MEDTRONIC INC.

Patents By Year of Grant:	340	23	15	17	12	32	32	67	61	111	89	77	90	243	208	1417
Patents By Year of Application:	388	12	14	17	38	55	58	86	115	90	114	185	182	61	2	1417

MITSUI TOATSU CHEMICALS INC.

Patents By Year of Grant:	338	28	44	64	78	94	88	130	139	118	95	79	72	45	2	1414
Patents By Year of Application:	404	61	77	81	115	119	107	118	104	86	97	38	7	0	0	1414

AGFA-GEVAERT N.V.

Patents By Year of Grant:	519	20	18	23	34	19	40	36	54	67	95	104	114	141	127	1411
Patents By Year of Application:	553	23	26	29	22	45	52	49	81	107	128	154	100	40	2	1411

## ---- Organizational Patenting

(Granted: Jan 01, 1969 - Dec 31, 1999) ---- Ranked List of Organizations with 1000 or More Patents ----

	Pre															
	1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL

## USX CORPORATION

Patents By Year of Grant:	1314	23	12	5	5	1	3	4	4	2	3	10	3	7	7	1403
Patents By Year of Application:	1344	6	4	6	1	1	7	4	1	8	6	5	5	4	1	1403

## INTERNATIONAL FLAVORS + FRAGRANCES INC

Patents By Year of Grant:	972	76	38	24	31	40	38	25	25	30	25	19	12	17	4	1376
Patents By Year of Application:	1064	35	25	30	34	31	31	16	35	28	18	18	9	2	0	1376

## NALCO CHEMICAL COMPANY

Patents By Year of Grant:	690	26	50	52	55	54	49	69	59	71	69	30	34	33	34	1375
Patents By Year of Application:	736	42	70	57	52	50	66	65	74	46	46	34	26	11	0	1375

## FANUC LTD.

Patents By Year of Grant:	90	76	104	78	135	125	129	122	101	87	70	73	51	71	49	1361
Patents By Year of Application:	259	80	97	125	163	125	99	83	64	85	85	33	55	8	0	1361

## AGENCY OF INDUSTRIAL SCIENCE &amp; TECHNOLOGY

Patents By Year of Grant:	371	54	60	80	96	92	96	72	62	49	57	57	73	71	57	1347
Patents By Year of Application:	467	78	91	95	94	74	66	50	51	65	74	76	55	9	2	1347

## ROLLS-ROYCE PLC

Patents By Year of Grant:	767	36	44	34	54	33	48	67	45	41	47	35	33	26	36	1346
Patents By Year of Application:	864	30	46	31	47	51	48	26	52	43	40	25	38	5	0	1346

## G. D. SEARLE &amp; CO.

Patents By Year of Grant:	601	23	32	34	33	34	40	47	92	58	90	64	75	60	62	1345
Patents By Year of Application:	659	31	31	40	39	34	67	88	73	84	104	45	32	16	2	1345

## BORG-WARNER CORPORATION

Patents By Year of Grant:	1244	35	26	5	4	2	4	0	0	0	0	0	0	0	0	1320
Patents By Year of Application:	1304	9	3	1	2	1	0	0	0	0	0	0	0	0	0	1320

## NGK INSULATORS LTD.

Patents By Year of Grant:	181	30	57	64	116	84	79	92	111	73	64	67	81	92	123	1314
Patents By Year of Application:	265	51	87	88	102	88	97	94	68	73	93	93	90	24	1	1314

## ROBERTSHAW CONTROLS COMPANY

Patents By Year of Grant:	989	19	31	21	24	33	29	36	23	34	26	18	12	6	7	1308
Patents By Year of Application:	1029	19	17	31	30	33	27	29	30	37	14	6	3	3	0	1308

## WHITAKER CORPORATION

Patents By Year of Grant:	0	0	0	0	0	0	0	0	61	193	199	211	198	216	229	1307
Patents By Year of Application:	0	0	0	0	0	3	11	115	228	244	219	237	215	35	0	1307

## ---- Organizational Patenting

(Granted: Jan 01, 1969 - Dec 31, 1999) ---- Ranked List of Organizations with 1000 or More Patents ----

	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
--	-------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

## WHIRLPOOL CORPORATION

Patents By Year of Grant:	732	27	54	57	46	45	56	38	41	41	32	41	18	35	38	1301
Patents By Year of Application:	788	69	44	54	36	58	24	31	59	39	26	24	43	5	1	1301

## ELF ATOCHEM NORTH AMERICA, INC.

Patents By Year of Grant:	822	34	41	53	43	49	35	54	34	26	23	22	13	25	21	1295
Patents By Year of Application:	882	50	54	45	50	40	34	21	29	19	36	12	17	6	0	1295

## NAVISTAR INTERNATIONAL TRANSPORTATION CORP.

Patents By Year of Grant:	1098	8	12	10	13	22	22	15	18	13	11	10	11	13	15	1291
Patents By Year of Application:	1119	4	10	22	17	22	12	18	12	12	11	19	6	7	0	1291

## MITA INDUSTRIAL COMPANY LTD.

Patents By Year of Grant:	204	43	41	30	46	50	84	97	120	93	82	86	73	154	76	1279
Patents By Year of Application:	276	36	43	42	81	109	92	111	96	74	104	95	96	23	1	1279

## SCHERING AKTIENGESELLSCHAFT

Patents By Year of Grant:	636	48	36	39	52	75	41	54	40	31	49	31	44	52	45	1273
Patents By Year of Application:	727	53	45	57	53	57	39	38	45	43	60	31	19	5	1	1273

## CIBA-GEIGY AG

Patents By Year of Grant:	1155	21	28	18	16	7	4	1	2	1	2	2	4	1	1	1263
Patents By Year of Application:	1192	27	15	12	1	3	2	0	1	5	4	1	0	0	0	1263

## YOSHIDA KOGYO KABUSHIKI KAISHA

Patents By Year of Grant:	607	86	70	62	70	56	73	58	43	64	53	10	2	1	0	1255
Patents By Year of Application:	728	71	53	56	66	71	54	45	79	26	6	0	0	0	0	1255

## INDUSTRIAL TECHNOLOGY RESEARCH INSTITUTE, TAIWAN

Patents By Year of Grant:	7	2	9	9	28	27	50	56	104	119	143	110	153	218	208	1243
Patents By Year of Application:	14	7	21	36	31	58	92	116	141	122	185	190	179	47	4	1243

## YAMAHA HATSUDOKI KABUSHIKI KAISHA, YAMAHA MOTOR CO., LTD.

Patents By Year of Grant:	291	41	52	38	24	64	75	88	85	53	54	72	74	129	101	1241
Patents By Year of Application:	377	45	28	34	72	90	76	82	60	82	81	117	84	13	0	1241

## EMERSON ELECTRIC CO.

Patents By Year of Grant:	625	30	38	26	46	56	41	44	46	42	31	47	39	57	67	1235
Patents By Year of Application:	674	36	30	56	37	44	50	43	49	56	33	59	50	18	0	1235

## MORTON THIOKOL, INC.

Patents By Year of Grant:	839	31	43	56	41	29	23	12	15	26	38	33	19	17	1	1223
Patents By Year of Application:	912	46	44	32	27	22	14	26	36	33	18	12	0	1	0	1223

--- Technology Assessment and Forecast Report ---

## ALL TECHNOLOGIES REPORT (PARTS A1, A2, B)

Page B - 19

#### ----- Organizational Patenting

(Granted: Jan 01, 1969 - Dec 31, 1999) ---- Ranked List of Organizations with 1000 or More Patents ----

---- Technology Assessment and Forecast Report ----

ALL TECHNOLOGIES REPORT (PARTS A1, A2, B)

Page B - 20

---- Organizational Patenting

(Granted: Jan 01, 1969 - Dec 31, 1999) ---- Ranked List of Organizations with 1000 or More Patents ----

	Pre															
	1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL

**STANDARD OIL COMPANY**

Patents By Year of Grant:	689	66	78	66	70	47	33	41	20	11	9	7	15	10	11	1173
Patents By Year of Application:	834	61	60	54	34	37	30	11	3	10	15	10	8	6	0	1173

**NIPPON GAKKI SEIZO KABUSHIKI KAISHA**

Patents By Year of Grant:	935	50	81	67	12	7	2	1	0	0	0	0	0	0	0	1155
Patents By Year of Application:	1055	64	26	6	3	0	1	0	0	0	0	0	0	0	0	1155

**BOEHRINGER MANNHEIM G.M.B.H.**

Patents By Year of Grant:	429	24	35	38	64	51	53	54	47	60	58	53	61	80	42	1149
Patents By Year of Application:	507	41	54	63	55	45	53	43	55	68	72	63	26	4	0	1149

**MEAD CORPORATION**

Patents By Year of Grant:	638	51	30	36	59	65	44	34	33	31	19	16	28	31	23	1138
Patents By Year of Application:	703	24	54	64	57	40	31	32	28	19	28	20	30	8	0	1138

**RAYCHEM CORPORATION**

Patents By Year of Grant:	416	53	83	58	96	57	57	53	39	35	39	32	34	50	36	1138
Patents By Year of Application:	563	51	56	90	51	54	38	46	36	30	48	40	32	3	0	1138

**TEIJIN LIMITED**

Patents By Year of Grant:	622	25	28	38	34	37	26	29	53	44	43	38	47	37	37	1138
Patents By Year of Application:	679	44	32	26	28	38	42	34	38	56	56	31	27	7	0	1138

**KUREHA CHEMICAL INDUSTRY CO., LTD.**

Patents By Year of Grant:	566	47	53	62	56	55	34	35	33	32	40	44	37	25	7	1126
Patents By Year of Application:	666	57	53	53	35	37	33	29	38	45	49	17	13	1	0	1126

**APPLE COMPUTER, INC.**

Patents By Year of Grant:	14	3	3	7	7	21	23	35	49	55	107	169	206	256	169	1124
Patents By Year of Application:	23	4	13	9	25	38	51	86	139	171	297	174	83	11	0	1124

**LITTON SYSTEMS INC.**

Patents By Year of Grant:	462	25	39	40	44	38	39	30	39	61	71	66	35	58	76	1123
Patents By Year of Application:	532	39	36	44	36	45	36	54	66	69	34	42	72	17	1	1123

**TEXTRON INC.**

Patents By Year of Grant:	883	8	14	13	18	24	13	20	20	21	14	14	13	19	11	1105
Patents By Year of Application:	902	10	14	23	17	16	26	16	23	9	18	15	12	4	0	1105

**MERCK PATENT GESELLSCHAFT MIT BESCHRANKTER HAFTUNG**

Patents By Year of Grant:	333	26	39	50	59	35	34	51	78	59	65	54	63	99	56	1101
Patents By Year of Application:	401	60	57	39	50	44	65	57	56	67	76	83	36	10	0	1101

## ---- Organizational Patenting

(Granted: Jan 01, 1969 - Dec 31, 1999) ---- Ranked List of Organizations with 1000 or More Patents ----

	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
--	-------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

## ROUSSEL-UCLAF

Patents By Year of Grant:	616	26	31	24	42	32	40	45	40	40	57	34	26	39	8	1100
Patents By Year of Application:	674	29	35	40	32	47	27	48	44	43	44	28	9	0	0	1100

## OUTBOARD MARINE CORPORATION

Patents By Year of Grant:	587	49	53	42	55	46	58	38	41	22	31	29	14	21	13	1099
Patents By Year of Application:	696	22	47	45	48	57	32	33	32	26	29	15	13	4	0	1099

## KOBE STEEL LTD.

Patents By Year of Grant:	408	54	47	31	35	38	61	74	36	56	43	46	42	66	56	1093
Patents By Year of Application:	498	41	29	24	64	62	55	56	41	58	43	64	50	7	1	1093

## DYNAMIT NOBEL AKTIENGESELLSCHAFT

Patents By Year of Grant:	894	31	39	26	15	15	9	8	16	9	9	6	1	4	0	1082
Patents By Year of Application:	962	29	16	8	11	11	15	8	7	9	4	1	1	0	0	1082

## KABUSHIKI KAISHA KOMATSU SEISAKUSHO

Patents By Year of Grant:	460	46	46	22	25	26	34	60	82	72	55	77	42	29	6	1082
Patents By Year of Application:	547	27	21	27	39	51	73	79	52	69	78	14	5	0	0	1082

## MICROSOFT CORPORATION

Patents By Year of Grant:	0	1	0	1	2	3	2	7	15	23	46	97	199	334	352	1082
Patents By Year of Application:	2	0	2	4	11	11	7	63	66	147	244	297	210	17	1	1082

## LSI LOGIC CORPORATION

Patents By Year of Grant:	1	1	3	6	7	5	10	20	39	45	78	127	168	229	339	1078
Patents By Year of Application:	5	2	10	9	7	21	27	59	91	111	217	265	226	28	0	1078

## GTE LABORATORIES, INC.

Patents By Year of Grant:	563	48	83	57	52	53	63	49	31	25	9	12	8	8	15	1076
Patents By Year of Application:	685	52	57	51	59	60	35	25	15	9	13	7	7	1	0	1076

## SULZER BROTHERS LTD.

Patents By Year of Grant:	652	40	54	58	46	58	43	57	46	9	6	2	0	0	0	1071
Patents By Year of Application:	732	53	51	44	57	47	46	32	6	2	1	0	0	0	0	1071

## MANNESMANN AG

Patents By Year of Grant:	316	38	53	33	34	44	63	63	83	60	52	54	47	59	65	1064
Patents By Year of Application:	406	31	35	41	59	62	78	59	56	56	58	53	56	14	0	1064

## COMPAQ COMPUTER CORPORATION, INC.

Patents By Year of Grant:	0	1	0	2	10	15	25	61	61	67	97	99	129	245	251	1063
Patents By Year of Application:	2	1	7	20	37	44	76	78	89	109	138	259	177	25	1	1063

## ---- Organizational Patenting

(Granted: Jan 01, 1969 - Dec 31, 1999) ---- Ranked List of Organizations with 1000 or More Patents ----

	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
--	-------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

## KAO KABUSHIKI KAISHA (KAO CORPORATION)

Patents By Year of Grant:	32	26	46	46	64	52	76	88	69	78	82	70	107	129	98	1063
Patents By Year of Application:	95	63	51	56	66	72	94	79	67	90	112	114	84	19	1	1063

## SCHERING CORP.

Patents By Year of Grant:	428	23	27	42	53	35	52	32	32	27	49	29	69	78	81	1057
Patents By Year of Application:	491	47	44	38	36	40	29	37	43	52	101	40	48	10	1	1057

## CONTINENTAL GROUP, INC.

Patents By Year of Grant:	987	11	9	12	14	10	6	0	0	0	0	0	0	0	0	1049
Patents By Year of Application:	1009	4	12	17	4	3	0	0	0	0	0	0	0	0	0	1049

## BBC BROWN, BOVERI &amp; COMPANY, LIMITED

Patents By Year of Grant:	795	73	78	58	22	5	0	0	0	0	0	0	0	0	0	1031
Patents By Year of Application:	929	72	23	6	1	0	0	0	0	0	0	0	0	0	0	1031

## LICENTIA PATENT-VERWALTUNGS-GMBH

Patents By Year of Grant:	833	16	30	24	23	26	10	11	12	7	8	9	5	3	7	1024
Patents By Year of Application:	878	28	19	22	18	9	9	10	5	12	5	6	3	0	0	1024

## CITIZEN WATCH CO., LTD.

Patents By Year of Grant:	565	36	60	31	27	20	25	22	23	23	19	28	29	42	69	1019
Patents By Year of Application:	655	30	19	23	28	28	24	15	27	32	31	35	56	16	0	1019

## STERLING DRUG INC.

Patents By Year of Grant:	882	18	15	8	27	21	15	22	6	3	0	1	0	0	0	1018
Patents By Year of Application:	920	11	10	12	24	24	16	0	0	0	1	0	0	0	0	1018

## NORTH AMERICAN PHILIPS CORPORATION

Patents By Year of Grant:	329	36	54	45	80	87	102	91	73	55	32	20	6	1	4	1015
Patents By Year of Application:	415	46	60	94	102	81	74	76	37	17	13	0	0	0	0	1015

## ASEA AKTIEBOLAG

Patents By Year of Grant:	887	42	41	22	18	2	1	0	0	0	0	0	0	0	0	1013
Patents By Year of Application:	956	29	26	1	0	1	0	0	0	0	0	0	0	0	0	1013

## BELL + HOWELL COMPANY

Patents By Year of Grant:	911	20	16	9	10	12	4	14	8	0	1	4	0	0	0	1009
Patents By Year of Application:	944	14	9	8	6	4	16	3	0	5	0	0	0	0	0	1009

## DAEWOO ELECTRONICS COMPANY, LTD.

Patents By Year of Grant:	1	0	1	0	1	1	0	3	1	19	47	129	214	319	273	1009
Patents By Year of Application:	2	0	1	0	2	1	2	6	44	149	212	298	243	49	0	1009

## ---- Organizational Patenting

(Granted: Jan 01, 1969 - Dec 31, 1999) ---- Ranked List of Organizations with 1000 or More Patents ----

	Pre 1986	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTAL
--	-------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-------

## MITSUI PETROCHEMICAL INDUSTRIES LTD.

Patents By Year of Grant:	238	18	23	24	44	84	99	76	83	75	61	41	76	57	10	1009
Patents By Year of Application:	283	19	35	100	94	72	66	62	69	63	81	45	20	0	0	1009

## UNIVERSITY OF TEXAS

Patents By Year of Grant:	48	25	21	21	50	54	83	73	86	97	89	87	81	96	91	1002
Patents By Year of Application:	106	33	57	62	79	74	75	97	102	102	107	55	44	7	2	1002

## Other Organizations (174895)

Patents By Year of Grant:	497992	32152	37909	36138	44120	41478	44397	45183	45775	47743	48274	52810	56423	75531	80813	1186738
Patents By Year of Application:	563439	34878	37968	41644	44235	45772	45980	48502	51494	58626	69794	66359	59690	17595	762	1186738